all from 63-3as (8)

8 December 1959

MEMORANDUM FOR THE RECORD

SUBJECT: First Meeting of the CIA Mechanical Linguistics Advisory
Committee

     This meeting was held in [ ] office from 1030 to 50X1
1240 on 4 December. In addition to [ ], as chairman, 50X1
there were four members: [ ] DD/P; [ ] Manage- 50X1
ment Staff; [ ] OSI; and Mr. Bagnall, OO. The Chairman 50X1
first gave members copies of a memorandum from General Cabell which
designated [ ] as the CIA Mechanical Linguistics Project 50X1
Officer and which also established a CIA Mechanical Linguistics
Advisory Committee under the chairmanship of the Project Officer.
The Chairman then gave a two-hour briefing on the history and
developments in the field of machine translation. Salient points
noted were as follows:

     a. The budget for machine translation work at [ ] 50X1
[ ] has run as follows: 50X1

	CIA	NSF
FY-56	$ 65,000	$ 35,000
FY-57	90,000	35,000
FY-58	150,000	36,000
FY-59	--	--
FY-60	178,000	--

In addition to the above, it is estimated that Air Force con-
tributed $75,000 worth of machine time and that CIA contributed
$4,000 worth of key punch operation. [ ] stated that 50X1
NSF was no longer contributing to this project because it was
considered out of the research phase and into a development
phase. He also noted that they expect to have operational
capability in translating Russian organic chemistry material
by February 1960.

Seen by CAD/O   16 DEC 1959

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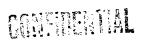SUBJECT: First Meeting of the CIA Mechanical Linguistics Advisory
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b. The following breakdown was given for difficulty of
problems faced in machine translation (number one least
difficult problem and number nine being the most difficult
problem).

(1) Words not in the glossary

(2) Words which require additional words in the target
language

(3) Abnormal order in the sentence

(4) Idiomatic expressions

(5) Polysemantic expressions

(6) Grammatically incomplete words

(7) Syntactically incomplete expressions

(8) Ambiguous symbols

(9) Localisms, grammatical errors and misprints

c. A proposal will be ready on 15 December for the
establishment of an Institute of Mechanical Linguistics at
50X1 _____ The proposal would provide for the
Agency to underwrite the Institute by contract with the
University. The University would provide the space and staff.
The Agency would provide funds estimated at $1,400,000 per
annum. The Institute would provide machine translations for the
Agency. The University has agreed to buy machine time when the
machine is not being used by the Institute, thereby presumably
offsetting some of the contract costs. The estimated cost is
divided into $650,000 for a computer and approximately $800,000
for preparation of material and operation of the machine. As
the product of the machine will require editing, or "revising"
as _____ would prefer to call it, he is proposing that   50X1
JPRS be given the funds to "revise" the machine product and
publish it. He gave no estimates of costs for the latter. The
major share of the $800,000 cost is in key punch operations for

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input to the machine. [   ] said that he has obtained   50X1
agreement from Mr. Watson of IBM Corporation for IBM to hire
300 key punch operators in Germany and do the entire key
punching there, followed by air mailing of the tapes to the US.
As key punch operators can be obtained for $960 per annum in
Germany, this would reduce the cost considerably, he stated.

d. /CONFIDENTIAL/ RCA has a reading scanner under develop-
ment capable of reading printed text and converting to tape at
the rate of 450 characters a second.

e. /CONFIDENTIAL/ Malpar Corporation is developing a
machine for conversion from the spoken voice to digital tapes.
This is being developed for SAC and NORAAD so that commanders
may give voice instructions directly to computers. Such a
development has ramification and potentialities, of course,
for translation of broadcasts.

f. There will be a seminar held at [   ] next spring   50X1
or summer to indoctrinate potential "revisers" on machine
translation.

g. Rome Air Development Center has an automatic ideograph
converter that converts Chinese characters to the telegraphic
code. Present capability is limited to about 2,500 characters.

h. It is generally accepted for the foreseeable future
that newspapers and material in the social science fields present
too many complex problems for resolution for machine translation.
Moreover, in the scientific fields where machine translation is
considered feasible, it will still be uneconomical to translate
any items of less than 3,000 words.

50X1   i. The CIA grant to [   ] for development of machine
translation, and the fact that [   ] is the CIA Project   50X1
Officer for this are both unclassified.

J. J. BAGNALL
Chief, Foreign Documents Division, OO

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